ZyXEL

VDSL2 Vectoring and 2.4 GHz Wireless for Optimized Triple-play Services

- **G.vectoring to maximize service range for service providers**
- **Advanced QoS to ensure service quality of triple-play services**
- **Remote provisioning and management through TR-069/ TR-181 issue-2**
- **ROM-D feature for easy distributor/operator customization services**
- **Easy upgrade of 3G/4G USB supports through configuration files**

Benefits

VDSL2 Vectoring for maximized service coverage

The ZyXEL VMG1312-B10D Wireless N VDSL2 4-port Gateway with USB supports Vectoring technology to eliminate crosstalk or interference among different VDSL lines. In the mechanism, Vectoring significantly increases bit rates to compete with cable/fiber technology as well as to enlarge service coverage without changing the current infrastructure — a way to significantly save cost comparing to fiber-to-the-home (FTTH) deployments, while the CAPEX can be optimized by improved data rates and coverage without upgrading equipment.

2.4 GHz 11n (2x2) for superior performance and coverage

The ZyXEL VMG1312-B10D features 802.11n technology to provide an ultimate combination for both speed and coverage. With 802.11n wireless data rates of up to 300 Mbps, the VMG1312-B10D provides stable, reliable wireless connections for high-speed data and multimedia applications; the 802.11n technology also empowers the device to eliminate dead zones and extend coverage while retaining backward compatibility with any certified device.

TR-069/TR-181 issue-2 remote management

With the TR-069/TR-181 standard management specifications, the ZyXEL VMG1312-B10D allows service providers to manage and configure client devices remotely without interfering other end users. This unique feature not only offers true "plug-and-play" experience, but also reduces deployment complexity and saves operating as well as maintenance costs for service providers.

Always-online, always-compatible 3G/4G alternative

The ZyXEL VMG1312-B10D features optional 3G/4G connectivity as a failover (or alternative) connection to mobile broadband networks in case of DSL outage. Internet traffics will be temporarily routed through the 3G/4G dongle plugged into the USB port; all traffics will be switched back as soon as the regular broadband service becomes available again. It is also efficient to have instant Internet access in remote offices, activities outside of the office or occasions where DSL service is temporarily unavailable. For comprehensive dongle compatibility, users can simply check and download the respective patch file to enable mobile broadband services immediately without upgrading the entire firmware of the gateway.

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VMG1312-B10D
Wireless N VDSL2 4-port Gateway with USB

G.vector	TR-069	TR-181	VDSL 17a	802.11n 300 Mbps

Multiple WAN for simplified ISP logistics and optimized CAPEX

When customers migrate from ADSL2+ or VDSL2 to PON or LTE, service providers are not required to invest on new CPE and replace them on customer sites; all they have to do is keeping the ZyXEL VMG1312-B10D by unplugging the DSL line and plug the Ethernet cable to the Ethernet WAN port. The existing customer VMG1312-B10D can be retained for terminating IP connection via the Ethernet WAN interface. In most cases, end users can enjoy the same, or even better, experience from the original rather than have it replaced by costly different physical connections.

Specifications

System Specifications

VDSL Compliance
- ITU-T G.993.2 VDSL2, band plan 997, 998
- Support VDSL profile: 8a/b/c/d, 12a/b, and 17a
- G.994.1 (G.hs) Handshake
- Rate adaption
- Upstream Power Back-Off (UPBO)
- Seamless Rate Adaption (SRA)
- VDSL OAM communication channels
- INP: up to 16 symbols
- PTM mode
- G.INP
- G.vector (G.993.5)
- PhyR configurable

ADSL Compliance
- ITU-T G.992.1 (G.dmt) compliant
- ITU-T G.992.2 (G.lite) compliant
- ANSI T1.413 compliant
- ITU-T G.992.3 (ADSL2) compliant
- ITU-T G.992.5 (ADSL2+) compliant
- Reach-Extended ADSL (RE ADSL)
- Seamless Rate Adaption (SRA)
- Support VC-based and LLC-based multiplexing

WLAN
- IEEE 802.11 b/g/n compliance
- Frequency: 2.4 GHz
- Data rate: 300 Mbps
- WPA/WPA-PSK, WPA2/WPA2-PSK
- WEP data encryption 64/128 bit
- Wireless Protected Setup (WPS)
- Multi SSID (up to 4) and hidden SSID support

USB
- File sharing
- 3G/4G dongle access support

Bridge/Router
- PPPoE (RFC2516)
- PPPoA (RFC2364)
- DHCP client/server/relay
- DNS proxy

Hardware Specifications
- WAN: One RJ-11 port for VDSL/ADSL2+ over POTS
- LAN: Four fast Ethernet ports
- WLAN: Two internal antennas
- USB: One for USB 2.0 host interface
- WLAN/WPS button: One real button for WLAN on/off and WPS configuration
- Reset/Restore button: One real button for restore factory default settings
- Status LED indicator: Power, DSL, Internet, Ethernet, WLAN/WPS, USB

Physical Specifications
- Item dimensions (WxDxH): 158 x 114.5 x 22 mm (6.22" x 4.48" x 0.86")
- Item weight: 186 g (0.41 lb.)
- Packing dimensions (WxDxH): 260 x 145 x 37 mm (10.23" x 5.7" x 1.45")
- Packing weight: 450 g (0.99 lb.)

Environmental Specifications

Operating Environment
- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 20% to 95% RH (Non-condensing)

Storage Environment
- Temperature: -30°C to 70°C (-22°F to 140°F)
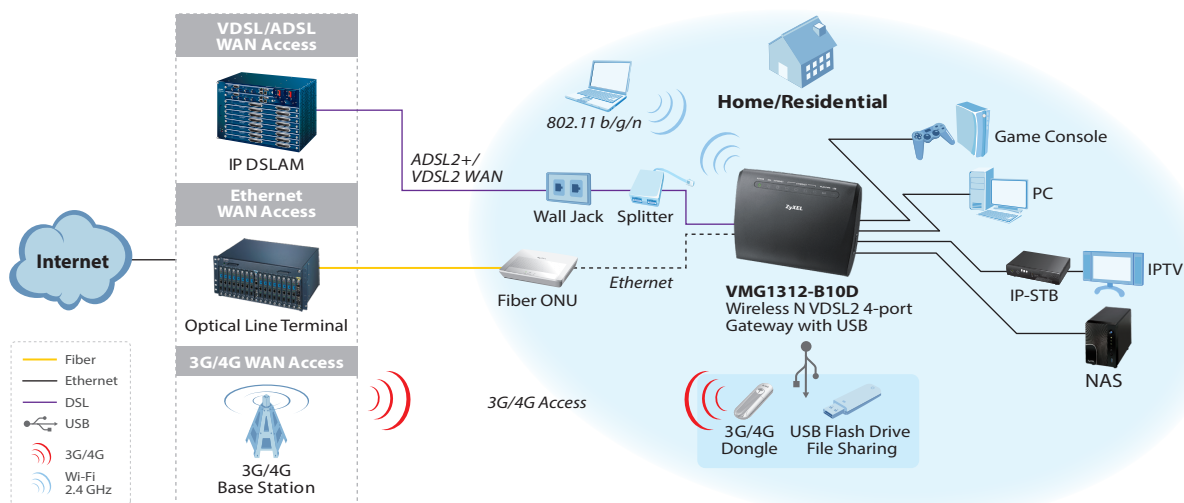- Humidity: 5% to 95% RH (Non-condensing)

Certification

EMC
- EN 301 489-1 V1.9.2
- EN 301 489-17 V2.2.1
- EN 61000-3-2: 2006 + A1: 2009 + A2: 2009
- EN 61000-3-3: 2013

Safety
- EN 60950-1: 2006 + A2: 2013

Application Diagram

VDSL/ADSL WAN Access — IP DSLAM

Ethernet WAN Access — Optical Line Terminal

3G/4G WAN Access — 3G/4G Base Station

Internet

ADSL2+/VDSL2 WAN · Wall Jack · Splitter · Fiber ONU · Ethernet · 3G/4G Access

Legend: Fiber · Ethernet · DSL · USB · 3G/4G · Wi-Fi 2.4 GHz

802.11 b/g/n · Home/Residential · Game Console · PC · IPTV · IP-STB · NAS

VMG1312-B10D Wireless N VDSL2 4-port Gateway with USB

3G/4G Dongle · USB Flash Drive File Sharing

For more product information, visit us on the web at www.ZyXEL.com

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